WHAT IS CLAIMED IS:

1. A method for administering a finely powdered drug, characterized in that the drug is pulverized to have a mean particle diameter of equal to or less than 100 μm to provide fluidity with a gas, a homogeneous fluid of the fine powder and the gas is prepared and transferred through a micro tube by a flow of the gas, and the finely powdered drug is sprayed on a target site from a tip of the micro tube, the quantity sprayed thereof being adjustable.

2. A method for administering a biopolymer, comprising:

fluidizing one or more types of fine particles of a biopolymer with a gas to prepare a homogeneous mixed-phase fluid of the biopolymer and the gas;

transferring the mixed-phase fluid through a micro tube by flowing the gas; and

spraying the fine particles of the biopolymer toward a target site from a tip of the micro tube, thereby providing hemostasis at a wound site, providing a seal thereto, preventing adhesion of an organ and healing a wound.

3. A method for administering a biopolymer, comprising:

mixing fine particles of a carrier of a bioabsorbable biopolymer with a finely powdered drug;

transferring the powder fluidized with a gas through a micro tube by flowing the gas; and

spraying a mixed powder of the biopolymer and the finely powdered drug toward a target site from the tip of the micro tube, thereby providing hemostasis at a wound site, providing a seal thereto, preventing adhesion of an organ and healing a wound.

4. The method according to any one of claims 1 to 3, wherein a homogeneous fluid of a finely powdered drug and a gas or a homogeneous fluid of a biopolymer and a gas, or a homogeneous fluid of a finely powdered drug and a gas with a biopolymer carrier are prepared by vibrating a mixing vessel for mixing the fine drug powder or the biopolymer and the gas.

5. The method according to any one of claims 1 to 3, wherein a quantity of the finely powdered drug or the biopolymer sprayed from the tip of the micro tube is adjusted by adjusting the powder concentration of the fluidized powder and the gas flow.

6. The method according to any one of claims 1 to 5, wherein a small diameter-tube having a smaller diameter than the micro tube is further provided coaxially in the micro tube, and wherein an aqueous solution of saline, an infusion solution or a drug and/or a biopolymer is injected from the smaller diameter-tube into a gas flow in the smaller diameter-tube, thereby spraying a mixture thereof with the drug in the fluidizing gas and/or the biopolymer fine particles in the micro tube.

7. The method according to any one of claims 1 to 5, wherein a smaller diameter-tube having a smaller diameter than the micro tube is further provided coaxially in the micro tube, wherein the finely powdered drug is transferred by the gas flow through the smaller diameter-tube and an aqueous solution of a physiological saline, an infusion solution or a drug and/or a biopolymer is transferred through the clearance between the inner and the outer tubes, and wherein both of the finely powdered drug and the aqueous solution to be sprayed is mixed at the tip of the micro tube.

8. The method according to any one of claims 1 to 7, wherein the drug fluidized with the gas is provided with sustained release, thereby delaying the release of the medicinal properties.

9. The method according to claim 8, wherein the release of the medicinal properties is sustained by microencapsulating, spray drying or freeze drying of the drug.

10. A method for administering a drug comprising:

fluidizing a biopolymer fine powder and fluidizing of a finely powdered drug in different vessels;

transferring the respective fine powders by gas flow through a micro tube; and

spraying the fine powders from a tip of the micro tube to a target site by:

first spraying the finely powdered drug and

second spraying the fine particles of the biopolymer to coat the drug component layer on the target site, thereby preventing diffusion and leakage of the drug to a location other than the target site.

11. A method for administering a drug comprising:

connecting containers containing two types of respectively different components in series with a micro tube; and

spraying a drug from a tip of the micro tube to a target site,

wherein a larger quantity of the component contained in the vessel that is connected nearer to the tip of the micro tube is sprayed than that contained in the other vessel in the first half of the spraying, and

wherein a larger quantity of the component contained in the vessel that is connected at the gas input portion side is sprayed than that contained in another vessel in the second half of the spraying, thereby gradually varying the concentrations of the respectively sprayed components.

12. A method for administering a biopolymer, wherein two types of biopolymer, which can be dissolved in water to exhibit a viscous nature or be coagulated, are employed, and wherein a set of fine particle powder thereof and solution thereof, or a set of solutions thereof are individually transferred through respective micro tubes by flows of gases, and the set are mixed at a tip of the micro tube, thereby spraying thereof to a target site.

13. The method according to claim 12, wherein the set of said two types of biopolymers is a combination of an anionic biopolymer and a cationic biopolymer.

14. The method according to claims 12 or 13, wherein said biopolymers are selected from a group consisting of synthetic polymers, polysaccharides, peptides and proteins.

15. A method for administering a drug for providing a hemostasis of a wounded face or providing a seal, characterized in that two capillary tubes are coaxially provided within a micro tube, and fibrinogen alone or a combined liquid thereof with other coagulation factor and thrombin alone or a combined solution thereof with calcium chloride are injected from one capillary tube and another capillary tube, respectively into a gas flow in micro tube, thereby spraying the mixture from a tip of the micro tube to a target site while mixing both solutions.

16. A method for administering a drug for providing a hemostasis of a wounded face or providing a seal, characterized in that a powder containing fibrinogen as a chief constituent alone or a mixed fine powder thereof with a biopolymer and an aqueous solution containing thrombin as a main constituent are employed, and a mixture thereof are sprayed to a target site by the method according to claim 15.

17. A fluidized matrix fine particle powder for use as a drug having sustained releasability in the methods for administering the drug according to any one of claims 1 to 16, wherein the drug is bound to a biopolymer within a solution via an intermolecular interaction consisting of a coulomb force, a hydrogen bond force and a hydrophobic bond force and pulverized at a lower temperature after drying.

18. A method for administering a drug for providing a hemostasis of a wounded face or providing a seal, wherein the drug according to claim 17 and a biopolymer having an ionic charge opposite to that of the matrix fine particle powder of the biopolymer according to claim 17 are sprayed to a target site from a tip of a micro tube in a fine particle powder state or a solution state.

19. The method according to any one of claims 2 to 7, wherein said biopolymer is a calcium phosphate-type powder, a hydroxyapatite-type powder or a powder of a glass-type material, which is a bone cement or an artificial bone filler, and wherein a mixed solution of a calcium phosphate-type powder or a hydroxyapatite-type powder and a liquid agent, or a mixed solution of glass-type material and an aqueous acids is sprayed from a tip of a micro tube to form a bone substitute at a target site.